

REMARKS

In the non-final Office Action, the Examiner rejected claims 11 and 23 under 35 U.S.C. § 112, second paragraph, as indefinite; rejected claims 1-5, 7-9, 12, 13, 15-21, 24-31, 33, 46, and 47 under 35 U.S.C. § 102(e) as anticipated by Belopolsky (U.S. Patent Application Publication No. 2003/0096537 A1); rejected claims 33 and 48 under 35 U.S.C. § 102(e) as anticipated by Aekins (U.S. Patent No. 6,057,743); rejected claims 6, 22, and 32 under 35 U.S.C. § 103(a) as unpatentable over Belopolsky in view of Criscolo et al. (U.S. Patent No. 6,446,138); rejected claims 11, 14, and 23 under 35 U.S.C. § 103(a) as unpatentable over Belopolsky in view of Official Notice taken by the Examiner; rejected claims 34, 35, 37-39, and 49 under 35 U.S.C. § 103(a) as unpatentable over Aekins in view of Belopolsky; rejected claim 36 under 35 U.S.C. § 103(a) as unpatentable over Aekins in view of Belopolsky and Criscolo et al.; rejected claims 40, 41, and 43-45 under 35 U.S.C. § 103(a) as unpatentable over Aekins in view of Belopolsky and Official Notice taken by the Examiner; and rejected claim 42 under 35 U.S.C. § 103(a) as unpatentable over Aekins in view of Belopolsky and Criscolo et al.

By this Amendment, Applicants amend claims 1, 6, 7, 13, 18, 22, 25, 29, 32, 40, and 46 to improve form. Applicants respectfully traverse the Examiner's rejections under 35 U.S.C. §§ 112, 102, and 103 with regard to the claims as now amended. Claims 1-49 remain pending.

The Examiner did not reject claim 10, but also did not identify claim 10 as allowed. Applicants assume that the Examiner meant to identify claim 10 as allowed. If this is incorrect, Applicants respectfully request clarification as to the status of claim 10.

In paragraph 3 of the Office Action, the Examiner rejected claims 11 and 23 under 35 U.S.C. § 112, second paragraph, as allegedly indefinite for failing to particularly point out and

distinctly claim the subject matter that Applicants regard as the invention. In particular, the Examiner alleged that the phrase "very high" is a relative term that renders the claims indefinite. Applicants respectfully traverse the rejection.

Claims 11 and 23 recite "a very high density cable interconnect," which is often referred to as VHDCI. Applicants submit that this type of interconnect is known in the art and, therefore, the Examiner's allegation that the terms "very high" in "very high density cable interconnect" make the claims indefinite is unfounded.

Accordingly, Applicants respectfully request that the rejection of claims 11 and 23 under 35 U.S.C. § 112 be reconsidered and withdrawn.

In paragraph 5 of the Office Action, the Examiner rejected claims 1-5, 7-9, 12, 13, 15-21, 24-31, 33, 46, and 47 under 35 U.S.C. § 102(e) as allegedly anticipated by Belopolsky. Applicants respectfully traverse the rejection with regard to the claims as now amended.

Initially, the Examiner alleged in the statement of rejection that claim 33 was rejected based on Belopolsky. While the Examiner addressed the features of each of the other claims rejected based on Belopolsky, the Examiner did not address the features of claim 33. Applicant assumes that claim 33 was mistakenly identified as being rejected based on Belopolsky. If this is incorrect, Applicants respectfully request clarification of the status of claim 33 with regard to Belopolsky.

A proper rejection under 35 U.S.C. § 102 requires that a single reference teach every aspect of the claimed invention either expressly or impliedly. Any feature not directly taught must be inherently present. In other words, the identical invention must be shown in as complete

detail as contained in the claim. See M.P.E.P. § 2131. Belopolsky does not disclose or suggest the combination of features recited in claims 1-5, 7-9, 12, 13, 15-21, 24-31, 46, and 47.

Amended claim 1, for example, recites a cable comprising a first connector, a second connector, and a cable conductor connected at a first end to the first connector and at a second end to the second connector. The second connector comprises a signal processing element configured to process signals transmitted between the first and second connectors. The cable conductor is configured to extend shielding from a device connected to one of the first connector or the second connector to another one of the first connector or the second connector.

Belopolsky does not disclose or suggest the combination of features recited in amended claim 1. For example, Belopolsky does not disclose or suggest a cable that includes a first connector, a second connector, and a cable conductor, as recited in claim 1. Instead, Belopolsky discloses an adapter 110 that "can be inserted between the electronic device and a communication cable which, in the absence of the adapter, could have been connected directly to the electronic device" (para. 0020).

The Examiner alleged that Belopolsky discloses a cable and cited paragraph 0002, line 2, of Belopolsky for support (Office Action, page 3). Applicants disagree.

At paragraph 0002, Belopolsky discloses:

There is a need in the field of electronics, and digital computers in particular, to perform electronic filtering on digital signals communicated between digital devices for the purpose of reducing or eliminating noise. Early filtering techniques were relatively simple and inexpensive to implement. For example, capacitive low-pass filters comprised wrapping a wire around a digital communication channel. Such low pass filters attenuate high frequency signals above a prescribed threshold frequency while allowing low frequency signals to pass through. Such low-pass filtering techniques have proven to be sufficient for many basic analog applications. However, digital signals often comprise high and low frequency harmonics and application of low pass filters result in distortion

of the digital signal. Accordingly, digital applications require more advanced filtering techniques.

Contrary to the Examiner's allegation, nowhere in this section does Belopolsky disclose or suggest a cable. Belopolsky discloses a cable in other sections. For example, at paragraph 0020, Belopolsky discloses:

Digital filter adapter 110 further comprises connector receptacle 120 for receiving a communication cable. In the illustrative embodiment, connector receptacle 120 has the format of a modular phone jack such as is disclosed in U.S. Pat. No. 4,698,025, the contents of which are hereby incorporated by reference in their entirety. As shown in FIG. 2, receptacle 120 comprises a housing 122 enclosing and defining a plug receiving socket 124 and a conductor having lead portion 126 and contact portion 128. When the plug end of a communication cable is inserted into socket 124, the electrical leads of the cable are placed in contact with contact portion 128. Furthermore, as is discussed below in connection with FIG. 4A and 4B, lead portions 126 are in electrical communication with an electrical filtering circuit. According to an aspect of the invention, receptacle 120 has the same interface format as that which connector 112 is designed to interface, i.e. the electronic device with which the adapter is used. Thus, the adapter 110 can be inserted between the electronic device and a communication cable which, in the absence of the adapter, could have been connected directly to the electronic device. Those skilled in the art will recognize that while receptacle 120 is described in the illustrative embodiment as having characteristics of phone jack, receptacle 120 may take other forms such as, for example, a modular jack receptacle, USB receptacle, SCSI receptacle, 1394 Infiniband receptacle, RS-232 receptacle, Metagig receptacle, VHSDC Metral receptacle, etc.

Nowhere in this section, or any other section, does Belopolsky disclose or suggest that the communication cable includes a first connector and a second connector that comprises a signal processing element configured to process signals transmitted between the first and second connectors, as required by amended claim 1.

Further, Belopolsky does not disclose or suggest a cable conductor that is configured to extend shielding from a device connected to one of the first connector or the second connector to another one of the first connector or the second connector, as recited in amended claim 1.

Belopolsky is completely silent with regard to a cable conductor that is configured to extend shielding from a device.

For at least these reasons, Applicants submit that claim 1 is not anticipated by Belopolsky. Claims 2-5, 7-9, and 12 depend from claim 1 and are, therefore, not anticipated by Belopolsky for at least the reasons given with regard to claim 1. Claims 2-5, 7-9, and 12 are also not anticipated by Belopolsky for reasons of their own.

For example, claim 2 recites that the first connector connects to a network device and the second connector connects to a patch panel. Belopolsky does not disclose or suggest this combination of features. The Examiner alleged that "it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus satisfying the claimed structural limitations" (Office Action, page 3).

Claim 2 does not recite an intended use, but instead positively recites that the first connector "connects" to a network device and the second connector "connects" to a patch panel. Accordingly, the Examiner's dismissal of these features is improper and the Examiner has, thus, not established a proper case of anticipation with regard to claim 2.

For at least these additional reasons, Applicants submit that claim 2 is not anticipated by Belopolsky.

Claim 3 recites that the first connector connects to a patch panel and the second connector connects to a network device. Belopolsky does not disclose or suggest this combination of features. Like claim 2, the Examiner alleged that "it has been held that a recitation with respect

to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus satisfying the claimed structural limitations" (Office Action, page 3).

Claim 3 does not recite an intended use, but instead positively recites that the first connector "connects" to a patch panel and the second connector "connects" to a network device. Accordingly, the Examiner's dismissal of these features is improper and the Examiner has, thus, not established a proper case of anticipation with regard to claim 3.

For at least these additional reasons, Applicants submit that claim 3 is not anticipated by Belopolsky.

Amended independent claims 13 and 25 recite features similar to features recited in claim 1. Claims 13 and 25 are, therefore, not anticipated by Belopolsky for reasons similar to reasons given with regard to claim 1. Claims 15-21, 24, and 26-31 variously depend from claims 13 and 25. Claims 15-21, 24, and 26-31 are, therefore, not anticipated by Belopolsky for at least the reasons given with regard to claims 13 and 25.

Amended independent claim 46 recites a combination of features of a cable comprising a first connector, a second connector, and a cable conductor connected at a first end to the first connector and at a second end to the second connector. The second connector comprises means for processing signals transmitted between the first and second connectors. The cable conductor comprises means for extending shielding from the first connector to the second connector. Belopolsky is completely silent with regard to a cable conductor that comprises means for extending shielding from a first connector to a second connector.

For at least these reasons, Applicants submit that claim 46 is not anticipated by Belopolsky. Claim 47 depends from claim 46 and is, therefore, not anticipated by Belopolsky for at least the reasons given with regard to claim 46.

In paragraph 6 of the Office Action, the Examiner rejected claims 33 and 48 under 35 U.S.C. § 102(e) as allegedly anticipated by Aekins. Applicants respectfully traverse the rejection.

Claim 33, for example, recites a combination of features of a patch panel comprising a plurality of first connectors, a plurality of groups of second connectors, and a plurality of signal processing elements. At least one of the first connectors is configured to connect to a network device via a cable. Each of the groups of second connectors corresponds to one of the first connectors. Each of the signal processing elements is configured to process signals transmitted between one of the first connectors and one of the groups of second connectors.

Aekins does not disclose or suggest the combination of features recited in claim 33. For example, Aekins does not disclose a patch panel that comprises a plurality of first connectors and a plurality of groups of second connectors, where each of the groups of second connectors corresponds to one of the first connectors. Instead, Aekins discloses a connector 10 that includes a set of input terminals 11-14 and a set of output terminals 15-18 (Fig. 1; col. 3, lines 61-64). Each input terminal 11-14 is connected to a corresponding one of output terminals 15-18 (col. 4, lines 8-16).

The Examiner alleged that Aekins discloses a patch panel and identified connector 10 in Figure 1 and column 4, lines 3-7, of Aekins for support (Office Action, page 6). The Examiner also alleged that Aekins discloses a plurality of first connectors and a plurality of groups of

second connectors and identified input terminals 11-14 and output terminals 15-18, respectively, in Figure 1 of Aekins for support (Office Action, page 6). Applicants respectfully disagree.

Even assuming, for the sake of argument, that a connector can be equated to a patch panel, input terminals 11-14 can be equated to first connectors, and output terminals 15-18 can be equated to second connectors (points which Applicants do not concede), Aekins does not disclose a patch panel that includes a plurality of first connectors and a plurality of groups of second connectors, as recited in claim 33. As explained above, Aekins discloses a one-to-one connection between input terminals 11-14 and output terminals 15-18. Claim 33, by contrast, recites that each of the groups of second connectors corresponds to one of the first connectors. Aekins does not disclose or suggest a similar relationship between the input and output terminals.

Aekins also does not disclose a plurality of signal processing elements, where each of the signal processing elements is configured to process signals transmitted between one of the first connectors and one of the groups of second connectors, as further recited in claim 33. As explained above, Aekins discloses a one-to-one connection between input terminals 11-14 and output terminals 15-18. Therefore, contrary to the Examiner's allegation, Aekins cannot disclose a signal processing element that is configured to process signals transmitted between one of the first connectors and one of the groups of second connectors, as required by claim 33.

For at least these reasons, Applicants submit that claim 33 is not anticipated by Aekins.

Independent claim 48 recites features similar to features recited in claim 33. Claim 48 is, therefore, not anticipated by Aekins for reasons similar to reasons given with regard to claim 33.



In paragraph 9 of the Office Action, the Examiner rejected claims 6, 22, and 32 under 35 U.S.C. § 103(a) as allegedly unpatentable over Belopolsky in view of Criscolo et al. Applicants respectfully traverse the rejection.

Claims 6, 22, and 32 depend from claims 1, 13, and 25, respectively. The disclosure of Criscolo et al. does not cure the deficiencies in the disclosure of Belopolsky identified above with regard to claims 6, 22, and 32.

For example, with regard to claim 1, Criscolo et al. does not disclose or suggest a cable conductor that is configured to extend shielding from a device connected to one of a first connector or a second connector to another one of the first connector or the second connector. Criscolo et al. discloses a shielded cable that reduces the susceptibility of a network computer system to electrical noise in an environment which may couple onto conductors and create interference in the network computer system (col. 4, lines 3-6). Criscolo et al. does not disclose or suggest, however, a cable conductor that is configured to extend shielding from a device connected to one of a first connector or a second connector to another one of the first connector or the second connector, as required by claim 1. Similar arguments apply to claims 13 and 25.

For at least the reasons given with regard to claims 1, 13, and 25, claims 6, 22, and 32 are patentable over Belopolsky and Criscolo et al., whether taken alone or in any reasonable combination.

In paragraph 10 of the Office Action, the Examiner rejected claims 11, 14, and 23 under 35 U.S.C. § 103(a) as allegedly unpatentable over Belopolsky in view of Official Notice taken by the Examiner. Applicants respectfully traverse the rejection.

Claims 11, 14, and 23 variously depend from claims 1 and 13. Without acquiescing in the Examiner's rejection, Applicants submit that claims 11, 14, and 23 are patentable over Belopolsky for at least the reasons given with regard to claims 1 and 13.

In paragraph 11 of the Office Action, the Examiner rejected claims 34, 35, 37-39, and 49 under 35 U.S.C. § 103(a) as allegedly unpatentable over Aekins in view of Belopolsky. Applicants respectfully traverse the rejection.

Claims 34, 35, and 37-39 depend from claim 33 and claim 49 depends from claim 48. Without acquiescing in the Examiner's rejection, Applicants submit that the disclosure of Belopolsky does not cure the deficiencies in the disclosure of Aekins identified above with regard to claims 33 and 48. Therefore, claims 34, 35, 37-39, and 49 are patentable over Aekins and Belopolsky, whether taken alone or in any reasonable combination, for at least the reasons given with regard to claims 33 and 48.

In paragraph 12 of the Office Action, the Examiner rejected claim 36 under 35 U.S.C. § 103(a) as allegedly unpatentable over Aekins in view of Belopolsky and Criscolo et al. Applicants respectfully traverse the rejection.

Initially, Applicants submit that the Examiner's rejection is improper. The Examiner rejected claim 36 based on a combination of Aekins, Belopolsky, and Criscolo et al. and rejected claim 33, from which claim 36 depends, based on Aekins alone. The Examiner did not identify any portion(s) of Belopolsky upon which the Examiner is relying. In fact, the Examiner has not identified any portions of Belopolsky. Further, the Examiner provided no motivation for combining the alleged disclosures of Belopolsky and Criscolo et al. with the disclosure of

Aekins. Accordingly, the Examiner's rejection is improper and the Examiner has not established a prima facie case of obviousness with regard to claim 36.

Nevertheless, without acquiescing in the Examiner's rejection, Applicants submit that the disclosures of Belopolsky and Criscolo et al. do not cure the deficiencies in the disclosure of Aekins identified above with regard to claim 33. Therefore, claim 36 is patentable over Aekins, Belopolsky, and Criscolo et al., whether taken alone or in any reasonable combination for at least the reasons given with regard to claim 33.

In paragraph 13 of the Office Action, the Examiner rejected claims 40, 41, and 43-45 under 35 U.S.C. § 103(a) as allegedly unpatentable over Aekins in view of Belopolsky and Official Notice taken by the Examiner. Applicants respectfully traverse the rejection.

Amended claim 40 recites a combination of features of a network system comprising a network device and a patch panel. The network device is configured to communicate signals on a network. The patch panel is configured to communicate signals with the network device via a plurality of cables. The patch panel comprises a plurality of pulse transformers configured to convert signals between balanced signals and single ended signals, and a plurality of common mode chokes corresponding to the pulse transformers and configured to remove common mode noise from the balanced signals.

Initially, Applicants submit that the Examiner's rejection is improper. The Examiner rejected claim 40 based on a combination of Aekins, Belopolsky, and Official Notice taken by the Examiner. The Examiner took Official Notice that a router is well known. Claim 40, however, does not recite a router. Therefore, the Examiner's rejection based on a combination of

Aekins, Belopolsky, and Official Notice taken by the Examiner is improper and should be withdrawn.

Nevertheless, neither Aekins, Belopolsky, nor the Official Notice taken by the Examiner, whether taken alone or in any reasonable combination, discloses or suggests the combination of features recited in claim 40. For example, neither Aekins, Belopolsky, nor the Official Notice taken by the Examiner discloses or suggests a patch panel configured to communicate signals with a network device via a plurality of cables. The Examiner alleged that Aekins discloses a patch panel and cited Figure 1 of Aekins for support (Office Action, page 9). Applicants respectfully disagree.

Figure 1 of Aekins shows a connector 10 (col. 3, lines 61-64). Assuming for the sake of argument that connector 10 can be equated to a patch panel (a point which Applicants do not concede), Applicants submit that Aekins does not disclose or suggest that connector 10 is configured to communicate signals with a network device via a plurality of cables, as required by claim 40. The disclosure of Belopolsky and the Official Notice taken by the Examiner do not cure this deficiency in the disclosure of Aekins.

For at least these reasons, Applicants submit that claim 40 is patentable over Aekins, Belopolsky, and the Official Notice taken by the Examiner, whether taken alone or in any reasonable combination. Claims 41 and 43-45 depend from claim 40 and are, therefore, patentable over Aekins, Belopolsky, and the Official Notice taken by the Examiner for at least the reasons given with regard to claim 40.

In paragraph 14 of the Office Action, the Examiner rejected claim 42 under 35 U.S.C. § 103(a) as allegedly unpatentable over Aekins in view of Belopolsky and Criscolo et al.

Applicants respectfully traverse the rejection.

Initially, Applicants submit that the Examiner's rejection of claim 42 is improper. The Examiner rejected claim 42 based on a combination of Aekins, Belopolsky, and Criscolo et al. The Examiner rejected claim 40, from which claim 42 depends, based on a combination of Aekins, Belopolsky, and Official Notice taken by the Examiner. Therefore, the Examiner rejection of claim 42 based on Aekins, Belopolsky, and Criscolo et al. without the Official Notice taken by the Examiner is improper.

Nevertheless, without acquiescing in the Examiner's rejection, Applicants submit that the disclosure of Criscolo et al. does not cure the deficiencies in the disclosures of Aekins and Belopolsky and the Official Notice taken by the Examiner as identified above with regard to claim 40. Claim 42 is, therefore, patentable over Aekins, Belopolsky, the Official Notice taken by the Examiner, and Criscolo et al. for at least the reasons given with regard to claim 40.

In view of the foregoing amendments and remarks, Applicants respectfully request the Examiner's reconsideration of the application and the timely allowance of pending claims 1-49.

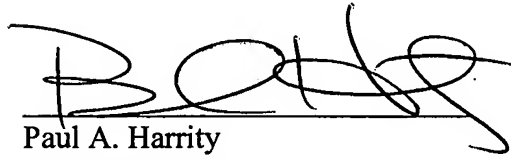
If the Examiner does not believe that all pending claims are now in condition for allowance, the Examiner is urged to contact the undersigned to expedite prosecution of this application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper,

including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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